

## CLAIMS

What is claimed is:

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- 1) A digital imaging system comprising:
- 4 a photo detector;
- an analog-to-digital converter to convert the dark current from the photo
- 6 detector;
- a processor that measures the dark current and controls the temperature of the
- photo detector, based on the dark current measurement.
- 2) The digital imaging system of claim 1 where the photo detector is a CCD.
- 3) The digital imaging system of claim 1 where the photo detector is a CMOS
- 2 detector.
- 6/4) The digital imaging system of claim 1 where the control of the temperature is done
- 2 by altering the performance of at least one heat generating component of the digital
- imaging system.
- 5) A method for thermal control of a digital imaging system comprising the steps of:
- 2 measuring the dark current of a photo detector;
- controlling the temperature of the digital imaging system based on the
- 4 measured dark current.

6) The method in claim 5 where the control of the temperature is done by altering the  
2 performance of at least one heat generating component of the digital imaging system.

7) The method of claim 5 where photo detector is a CCD.

8) The method of claim 5 further comprising the steps of:  
2 converting the dark current measurement into temperature information.

9) The method of Claim 5 further comprising the steps of:  
2 measuring the dark current of the photo-sensor at a known temperature and  
storing the measured dark current for later use.

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